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# *On Books*

## The Science of Values: *The Moral Landscape* by Sam Harris

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In *The Moral Landscape*, Sam Harris (2010) proposes that science can be used to identify *values,* which he defines as ''facts that can be scientifically understood: regarding positive and negative social emotions, retributive impulses, the effects of specific laws and social institutions on human relationships, the neurophysiology of happiness and suffering, etc.'' (pp. 1–2). Harris argues that scientific principles are appropriately applied in this domain because ''human well-being entirely depends on events in the world and on states of the human brain. Consequently, there must be scientific truths known about it'' (p. 3). Although readers of this journal would have few problems with the assertion that behavior (here, reports of well-being and correlated responses) changes as a function of environmental events, the role of the neurophysiological correlates of these responses has been a point of debate within the conceptual literature of behavior analysis (e.g., Elcoro, 2008; Reese, 1996; Schaal, 2003).

*The Moral Landscape* represents an important contribution to a scientific discussion of morality. It explicates the determinants of moral behavior for a popular audience, placing causality in the external environment and in the organism's correlated neurological states. The contemporary science of behavior analysis has and will continue to contribute to this discussion, originating with Skinner's seminal works *Beyond Freedom and Dignity* (1971) and *Walden Two* (1976). Neither book is explicitly a treatise on morality, but both are attempts to introduce behavioral science to a broader audience. The behavior-analytic approach (which is largely compatible with Harris's efforts in *The Moral Landscape*) supports the superiority of a scientific approach to life, including questions of morality. Skinner (1976), for example, highlighted the importance of the experimenting culture to identify practices that were effective (cf. Baum, 2005).Tacit within behavior analysis is the expectation that a scientific worldview can and will improve the quality of life. Consistent with this view, Harris suggests that the currently accepted determinants of morality (e.g., religion, faith) are not what society ought to espouse. Instead, he proposes that scientific inquiry into morality as its own subject would enhance global levels of well-being. From a behavioral perspective, the study of morality is necessarily the study of behavior, including the contexts in which it occurs and the environmental events of which it is a function. Analysis in this framework may allow the successful identification of the variables that control moral behavior, and,

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ultimately, the development of cultural practices to increase its occurrence.

*The Moral Landscape* is a recent contribution to a collection of books (e.g., Dawkins, 2006; Harris, 2005; Hitchens, 2007; Sagan, 2006) that subject the claims of religion to the same standard of empirical rigor that other epistemologies (e.g., science) must abide by. Dawkins (2006), for example, criticizes the appeal to supernatural gods as explanatory agents and takes issue with the privileged place of religion within societal discourse. Harris echoes and expands on these concerns in *The Moral Landscape*.

Collectively, these authors take issue with the notion of nonoverlapping magisteria (NOMA; Gould, 1999), which is the assertion that science and religion are both valid systems of knowledge, and that neither discipline can inform the other. Behavior analysts take issue with the notion that scientific behavior and religious behavior are egalitarian (see Galuska, 2003, for suggestions about successful navigation of NOMA by behavior analysts). Skinner (1987) commented, ''Science, not religion, has taught me my most useful values, among them intellectual honesty. It is better to go without answers than to accept those that merely resolve puzzlement'' (p. 12). Although religion may be effective at inducing behavioral change among its followers, it continues to have unintended effects that, to borrow Harris's analogy, reach the depths of the moral landscape. Hitchens (2007) makes a subtitular claim that ''religion poisons everything,'' supporting his thesis with discussions of demonstrably negative outcomes associated with religious practice, discussing examples of how religion leads to poorer states of human health and impedes social progress. As an alternative, he proposes a rational, scientific view of the world, which Harris applies to the study of morality.

Because they are members of a relatively small discipline, it may be beneficial for behavior analysts to align themselves with and support the authors of these works, garnering attention from the controversial coverage from popular media outlets that writers such as Dawkins and Harris regularly elicit. Perhaps controversial exposure is better than no exposure at all, especially when behavior analysis can enable the development of the hypothetical secular society that Harris, Dawkins, Hitchens, and Sagan call for. Indeed, behavior analysis may be the only discipline that can identify and establish reinforcers to motivate prosocial, so-called moral, human behavior in the absence of organized religion.

It is noteworthy that no psychologist has tackled the problem of secular values alongside these authors in spite of the contradictory facts that religion presents about human nature, facts that take away from the value of our discipline. Indeed, much of the rich ''prescientific'' vocabulary that inhibits psychology from becoming a natural science is either religious or metaphysical in nature (Schlinger, 2004). It is imperative for the validation of the field of psychology, as well as behavior analysis by association, to be a part of this modern empiricist movement championed by Harris.

Harris's argument unfolds in an introduction and five subsequent chapters. In the introduction, he defines his title concept of the *moral landscape* as a hypothetical space representing human well-being, encompassing all human experiences. This space contains the well-being of members of all cultures and groups of individuals on the planet. The peaks of this landscape are the heights of prosperity, and the valleys represent the depths of human suffering. The goal of plotting the cartography of this landscape is to maximize ''the well-being of conscious creatures'' (i.e., humans) which ''must translate at some point into facts about brains and their interactions with the world at large'' (p. 11). For Harris, the brain

is the locus of interest. We believe that it is possible to recast the argument into one about whole organisms—with correlated neurological states, perhaps—interacting with their environment to determine behavior. This scientific approach to human behavior, with a goal of improving the welfare of living organisms, is consistent with the application of behavior analysis to bring about societal change (e.g., Baer, Wolf, & Risley, 1968; Skinner, 1971, 1978).

In the subsequent chapters of his book, Harris makes the case for applying scientific thinking to determine human values. Chapter 1 outlines the knowable nature of moral truths, suggesting that they are subject to scientific (rather than religious) inquiry. In Chapter 2, Harris tackles the topics of good and evil, suggesting that these terms may be outmoded; instead, the goal of both religion and science should be to determine ways to maximize human well-being. In the third chapter, Harris explores the neurological correlates of belief, tracing the complex sets of behavior back to brain activity. In the fourth chapter, he examines the role of religious faith in contemporary society, suggesting that a scientific approach may lead to an increase in overall well-being. The final chapter outlines a plan for future work, disentangling science and philosophy, and offering an optimistic picture about the use of science to improve the human condition. In sum, Harris presents a cogent argument for the application of scientific principles to identify moral principles and values. In what follows, we describe his arguments and some intersections with the behavioral approach to this topic.

## DEFINING MORALITY

The crux of Harris's argument is that the well-being of conscious creatures should be the paramount consideration when determining whether an action is morally correct or incorrect. Harris uses the term *conscious creature* extensively in formulating his science of morality. Although he does not provide an explicit definition of *consciousness*, his use seems to be at odds with the behavioral approach to this construct. For Harris, consciousness seems to be a property of the brain, discoverable by explorations in neuroscience. In contrast, Skinner (1945) suggested that, when defining psychological terms, it is useful to identify the conditions under which those terms are used, and the history of the verbal community that produces that usage. Consistent with this analysis, Schlinger (2008) proposed that consciousness is best understood with a focus on the behaviors that are associated with the use of the word *consciousness* (e.g., self-talk, private behavior), rather than the study of the reified thing itself.

Consciousness, defined as a set of verbal behavior, is a prerequisite for a discussion of morality. Verbal behavior is required for us to evaluate our own subjective well-being in relation to the well-being of others, allowing us to identify the relative "goodness" or "badness" of each; such an analysis is necessarily dependent on verbal behavior. Indeed, in other media (cf. The Richard Dawkins Foundation, 2011), Harris has suggested that a universe of rocks could not define a science of morality, because consciousness (i.e., a verbal repertoire about one's own behavior) is required to discuss subjective experience.

When providing a definition for the well-being that should be promoted, Harris likens this concept to physical health, noting,

> Indeed the difference between a healthy person and a dead one is about as clear and consequential a distinction as we ever make in science. The difference between the heights of human fulfillment and the depths of human misery are no less clear even if new frontiers await us in both directions. (p. 12)

With this definition, it is possible to cast a wide net and capture a multi-

tude of human behaviors and conditions. Harris suggests that, much like physical health, *well-being* eludes concise definition. Although the use of well-being is not precisely operationalized, he does define *morality* as "the principles of behavior that allow people to flourish" (p. 19). This phrasing is likely the closest to an operational definition of morality that is possible without undertaking the scientific analysis that Harris proposes in which fundamental principles to increase moral behavior could be discovered. The use of *flourishing human life* as a criterion for morality may be consistent with Skinner's (1945) approach to evaluating terms as a function of the conditions in which they occur: Morality, for Harris, may be evident only when well-being is enhanced. The next step of the analysis would be to systematically identify the conditions that give rise to that flourishing human life, exploring the antecedents (e.g., having basic needs met, education, leisure time) and the consequences thereof. Behavioral technologies such as functional analysis (e.g., Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994) may provide the tools required to successfully carry out this work.

A major premise of Harris's work is that there is variability in the degree of "goodness" that individuals experience in life, and this variability can be accounted for by brain states and events in the external environment. If one accepts the distinction between "the good life" and "the bad life" and the idea that there are lawful patterns and factors that contribute to each of these outcomes (i.e., a deterministic framework), it allows the development of a scientific view of morality. This scientific view, according to Harris, stands as an alternative to traditional religious perspectives. Harris writes, "There is simply no question that how we speak about human values—and how we study or fail to study the relevant phenomena at the level of the brain—will profoundly influence our collective future" (p. 25). This theme can be found in the writings of Skinner (1971), who suggested that the scientific approach to the world's practical problems can allow the development of solutions to those problems. Although Harris's argument is framed in the language of neuroscience instead of Skinner's behavioral perspective, a similarly pragmatic approach shows through.

The introduction of Harris's book is wholly devoted to the qualification of values as scientific facts: verifiable statements about organisms and the environment around them. This argument, that utterances reflect or are symbolic of environmental events, should be familiar to those who are familiar with Skinner's conceptualization of a verbal community. If we are to accept that utterances about "moral behavior," "morality," or "ethics" are not importantly different from other verbal behavior, then they too can become a topic for scientific inquiry. Such an analysis could evaluate the conditions under which this verbal behavior is emitted and the consequences thereof. With this understanding of the contingencies of reinforcement that promote and maintain these responses, it would be possible to shape the moral behavior of individuals or groups.

Harris posits that "science can, in principle, help us understand what we *should* do and *should* want—and, therefore, what *other people* should do and should want in order to live the best lives possible" (p. 28). This is congruent with Skinner's acceptance of the value judgment (i.e., *is* or *ought* statements) as a tool to reveal the oftentimes subtle contingencies that control social behavior. Harris describes well-being as the conceptual basis for morality and values, stating, "there *must* be a science of morality … because the well-being of conscious creatures depends upon how the universe is, altogether" (p. 28). Bringing morality into the natural world makes it amenable to scientific study,

and Harris's book complements the work that behavior analysts have done with respect to questions of morality.

The behavior-analytic approach to values and morals has its origin with Skinner, who suggested that things that individuals call *good* are reinforcing, and that "any list of values is a list of reinforcers" (1953, p. 35). When describing Skinner's approach, Ruiz and Roche (2007) commented that "it is important to provide translations of value statements in functional terms in order to reveal the relevant contingencies of reinforcement" (p. 4). Thus, as with the discussion of consciousness above, the conditions under which particular behaviors are morally correct or incorrect must be considered. This functional approach may expand on Harris's proposed science of values and make it more acceptable to a behavioral audience.

## DISTINGUISHING BETWEEN PHILOSOPHICAL POSITIONS ON MORALITY

A large portion of Harris's book differentiates between the religious notions of values and morality and the scientific principles thereof. Harris suggests that religious concerns about morality are related to human well-being. In Chapter 1, he describes an agenda of finding scientific truth about questions of morality. To deal with the relative unpopularity of his approach (Harris reports that more people in contemporary American society believe that morality should stem from religious than scientific inquiries), he asserts that consensus and truth are not the same thing: "One person can be right, and everyone else can be wrong. Consensus is a guide to discovering what is going on in the world, but that is all that it is. Its presence or absence in no way constrains what may or may not be true" (p. 31). Harris reports that 57% of Americans believe that preventing homosexual marriage is a moral imperative (p. 53), a clear example of a common belief that impairs the progression of well-being.

With respect to differences between perspectives of different groups, Harris writes, "those who do not share our scientific goals have no influence on scientific discourse whatsoever; but, for some reason, people who do not share our moral goals render us incapable of even speaking about moral truth" (p. 34). Here, Harris is suggesting that religious beliefs, which may be incorrect according to other epistemological systems (e.g., science), prevent other systems from declaring them to be incorrect. However, religious belief systems do comment on the "truth" of empirical inquiries, a double standard with which Harris takes issue, and a concern that is expressed by other authors such as Dawkins (2006). The ability of science to comment on affairs related to religion and morality has the potential for the further advancement of human well-being via the development of new ideas and technologies. Without a scientific response to these issues, progress seems less likely.

To determine the merits of given philosophical systems, one can adopt a relativistic position. Relativism is the belief that points of view have no absolute truth. This tradition is largely a by-product of scientific skepticism, and can be just as harmful to a science of morality as any religious doctrine. By Harris's account, moral relativism is endemic throughout the scientific community. This is problematic for the development of the theoretical moral landscape because historically science has "had no opinion" on moral issues, which Harris ascribes to a fear of retribution by religious groups, political agendas, or intellectual laziness; he objects to the continuance of this harmful tradition. Harris suggests that relativism is accepted as an absolute position and is not subject to a contextual analysis (that relativism itself should require). He points out that this absolute acceptance of a relativistic worldview

is fundamentally contradictory to the principle of relativism itself. If we are to believe that the practices in question (examples that Harris highlights include female genital mutilation and subjugation of women) are correct in the relevant cultural and historical time period, this belief must also be cast as relative and changeable, which it generally is not. In addition, Harris suggests that relativistic positions may lead to misguided beliefs about how to improve human well-being.

Perhaps at odds with Harris's analysis, Skinner suggested that there are multiple sets of values that may emerge across cultural settings: "Each culture has its own set of goods, and what is good in one culture may not be good in another" (1971, p. 122). The reinforcers (i.e., values) identified across cultures necessarily vary as a function of the different physical and cultural environments in which the moral systems develop. For Skinner, the criterion by which to evaluate the goodness of a cultural practice is the degree to which it promotes survival of the society. Thus, although there are potentially many different ways for a culture to survive, there may be some that maximize the level of well-being of the individuals and the group. Skinner's position is pragmatic, but has garnered criticism from within the behavior-analytic community (e.g., Ruiz & Roche, 2007). Critiques of the cultural survivability criterion emphasize the impossibility of determining which cultural practices will, in fact, enhance survivability without definite knowledge of the future. Ruiz and Roche (2007) called "for behavior analysts to consider seriously where we as a community stand on relativism and to discuss openly and thoroughly the criteria we will use in adopting ethical principles" (p. 11). Harris's position of rejecting moral relativism in favor of universal principles to promote well-being may help to inform the behavior-analytic discourse.

## BELIEF

After establishing that our beliefs can, indeed, be incorrect or somehow inconsistent with reality, Harris qualifies his argument. Citing research conducted in his own laboratory on the neuroscience of belief, he posits that there is no difference between what we deem to be "knowledge," "belief," and "truth," and these utterances can be attributed to functionally equivalent neurological correlates. Indeed, the brain's endogenous reward systems reinforce beliefs and utterances that we deem "true" with positive emotional valence. He writes,

> When we believe a proposition to be true, it is as though we have taken it in hand as part of our extended self, we are saying in effect, "This is mine. I can use this. This fits my view of the world." (p. 121)

This evidence from neuroscience supports the notion that values, knowledge, belief, and truth belong to the same class of verbal behavior, but may not necessarily share discriminative stimuli (Skinner, 1945). Taking this research to its logical conclusion, one can suggest that an individual's learning history would dictate which beliefs, truths, or bits of knowledge could fit into a person's worldview. By Harris's account, we dislike information that contradicts our worldviews as much as we dislike being lied to. With this bias established, it is easier to see precisely how maladaptive or harmful beliefs can be propagated.

## ORGANISM–ENVIRONMENT INTERACTIONS

In Chapter 2, Harris suggests that an understanding of the human brain and its states will allow an understanding of forces that improve society (e.g., prosocial behavior). He writes,

> As we better understand the brain, we will increasingly understand all of the forces … that allow friends and strangers to collaborate successfully on the common projects of

> civilization. Understanding ourselves in this way and using the knowledge to improve human life, will be among the most important challenges to science in the decades to come. (pp. 55–56)

Cooperation is one of the mechanisms through which values may come about, and Harris contends that "there may be nothing more important than human cooperation" (p. 55). Conceptualizing the failures of cooperation as the everyday grievances of theft, deception, and violence, it is plain to see how failing to cooperate can be an impediment to human well-being and moral development.

Harris emphasizes the role of consequences in the formation of values, suggesting that

> all questions of value depend upon the possibility of experiencing such value. Without potential consequences at the level of experience—happiness, suffering, joy, despair etc.—all talk of value is empty … even within religion, therefore, consequences and conscious states remain the foundation of all values. (p. 62)

In this quote, Harris suggests the power of consequences to effect change in behavior. In so doing, Harris takes morality out of his context of neurological events and places it into an environmental framework. Although he does acknowledge the behavior–environment interaction as a cause for moral responding, a behavior-analytic approach would go further, emphasizing the power of consequences to increase or decrease (i.e., reinforce or punish) the likelihood that moral behavior would occur. It is the consequences of behavior that make it more or less likely to occur in a selectionist framework (cf. Glenn & Madden, 1995), and those same consequences seem to work similarly at the neurological level (e.g., Stein, Xue, & Belluzzi, 1994). Thus, it is the interaction between the environment and the organism that leads to the development of any behavior, including moral responses and those associated with varying degrees of well-being.

Taking this environment-based approach, Harris presents contemporary research from neuroscience throughout his book. After describing the neurological precursors and correlates of behavior, he dismisses the notion of free will, citing additional biological data to suggest that it is the brain—and not an agent of free will—that is responsible for behavior. He makes a familiar argument for a deterministic framework, in which the historical and contemporary environments (including neurological states) are responsible for behavior. After dismantling free will, Harris describes ramifications for the justice system. With this knowledge, we can no longer hold people accountable for their actions because they are determined by historical and contemporary events. This view negates a justice system based on punishment or retribution. Consistent with a behavioral position (e.g., Chiesa, 2003), Harris suggests that, with increased knowledge about the brain (for which we may be able to substitute *behavior* without losing any meaning, because the brain necessarily belongs to a complete organism), reforms of the justice system may be necessary. A reformed justice system would be more compassionate based on its more accurate understanding of causes of behavior (i.e., the environment and biological states). Harris takes this position to an extreme, proposing that it may even be immoral to fail to consider environmental and biological factors within the context of the justice system. Here, there is a fundamental compatibility between the approach that Harris is advocating and a behavioral worldview.

Indeed, the understanding of proximate and ultimate causes that precede any event are essential to making logically coherent arguments, not just from the perspective of the justice system but in understanding the behavior of all organisms. The ultimate cause of many reprehensible human behaviors lies in the distant

evolutionary past. Proximate causes can be shaped over the course of single lifetimes and may covary with environmental stimuli (Mayr, 1961; Skinner, 1981). For the purposes of Harris's argument, we will agree that the nervous system and the brain are proximate causes of behavior, but these were influenced by both the evolutionary history of the species and the learning environment of the individual (cf. Schlinger & Poling, 1998, pp. 39–41). A more thorough discussion of ultimate cause may be a better locus to develop the science of moral behavior which he calls for.

## A PROGRAM FOR CHANGING MORAL BEHAVIOR

If Harris's claims that morality is knowable through scientific processes are true (and, based on his arguments in the book, we, at least, are convinced), behavior analysis ought to be at the forefront of the emerging science of morality. As a discipline, behavior analysis is uniquely positioned to deal with matters that span the continuum of well-being and suffering (i.e., the peaks and valleys of Harris's moral landscape). Behavior analysis has a history of developing and using demonstrably effective behavior-change procedures. Because Harris's neurological correlates of well-being are isomorphic with human behavior, the methods of experimental and applied behavior analysis could be used to support the type of work that Harris proposes.

In the first chapter of the book, Harris outlines three primary directions that work in the science of morality can take: (a) Explain why people engage in particular behavior "in the name of morality"; (b) "determine which patterns of thought and behavior we should follow in the name of 'morality'"; and (c) convince people "who are committed to silly and harmful patterns of thought and behavior in the name of 'morality' to break these commitments and to live better lives" (p. 49). Behavior analysts have the conceptual framework and behavior-change techniques to potentially make meaningful contributions to each of these goals.

## CONCLUSIONS

In *The Moral Landscape,* Harris begins to develop a science of morality that he believes could be used to maximize the well-being of humans. Although his approach to morality is largely grounded in neuroscience (rather than the study of the whole organism), he does present an environment-based approach to morality to a wide readership, continuing in the tradition of other recent works that have espoused secular worldviews (e.g., Dawkins, 2006; Hitchens, 2007). Harris's approach to the development of the science of morality is largely consistent with the behavioral approach; for him, as for behavior analysts, morality is behavior, and that behavior is subject to environmental (and biological) manipulation.

As part of his work, Harris describes the need to produce change in methods for producing change in moral behavior; the discipline of behavior analysis is ideally suited to contribute to this mission. The application of behavioral techniques to socially significant problems has been a hallmark of behavior analysis ever since Baer et al. (1968) laid the foundations of applied behavior analysis. Behavior change has been demonstrated from the level of the individual to the level of society, and these same principles could be applied to moral behavior, as described by Harris, to promote universal well-being. No other discipline matches behavior analysis in its scientific understanding of behavior or its tools to modify it. If Harris is correct that science should take an active role in determining human values, behavior analysts must be a part of that conversation.

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